

CLAIMS

1. A polypeptide described in the following (a) or (b):

(a) a polypeptide, which has the amino acid sequence shown in SEQ ID NO: 1 of the sequence listing; or

5 (b) a polypeptide, which has an amino acid sequence resulting from substitution, insertion, deletion, and/or addition of one or more amino acids in the amino acid sequence shown in SEQ ID NO: 1 of the sequence listing, and which has amidase activity.

10 2. The polypeptide according to claim 1, which is derived from a microorganism belonging to genus *Arthrobacter*.

3. The polypeptide according to claim 2, wherein the microorganism is *Arthrobacter* sp. KNK1101J (FERM BP-10192).

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4. DNA, which encodes the polypeptide according to any one of claims 1 to 3.

5. DNA described in any one of the following (c) to (e):

20 (c) DNA, which has the nucleotide sequence shown in SEQ ID NO: 3 of the sequence listing;

(d) DNA, which hybridizes with DNA having a nucleotide sequence that is complementary to the nucleotide sequence shown in SEQ

ID NO: 3 of the sequence listing under stringent conditions, and which encodes a polypeptide having amidase activity; and

(e) DNA, which has a nucleotide sequence resulting from substitution, insertion, deletion, and/or addition of one or more nucleotides in the nucleotide sequence shown in SEQ ID NO: 3 of the sequence listing, and which encodes a polypeptide having amidase activity.

6. A recombinant plasmid, which is obtained by insertion of the DNA according to claim 4 or 5 into a vector.

7. The recombinant plasmid according to claim 6, wherein the vector is pUC18, pUC19, pBR322, pACYC184, pSC101, pT7Blue, or pUCNT.

8. The recombinant plasmid according to claim 6 or 7, which is pHA002 specified in the restriction map shown in Figure 2.

9. A transformant, which is obtained by transformation of a host microorganism with the recombinant plasmid according to any one of claims 6 to 8.

10. The transformant according to claim 9, wherein the host microorganism is *Escherichia coli*.

11. The transformant according to claim 9, which is *Escherichia coli* HB101 (pHA002) (FERM BP-10193).

5 12. A microorganism, which is able to produce the polypeptide according to claim 1 and belongs to genus *Arthrobacter*.

13. The microorganism according to claim 12, which is *Arthrobacter* sp. KNK1101J (FERM BP-10192) or a mutant thereof.

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14. A method for producing amidase, comprising culturing a microorganism that is able to produce the polypeptide according to any one of claims 1 to 3, accumulating said polypeptide in the culture, and collecting it.

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15. The production method according to claim 14, wherein the microorganism is the transformant according to any one of claims 9 to 11.

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16. The production method according to claim 14, wherein the microorganism is the microorganism according to claim 12 or 13.